

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

**Cetylpyridinium Chloride: Butanol
2:1 by weight**

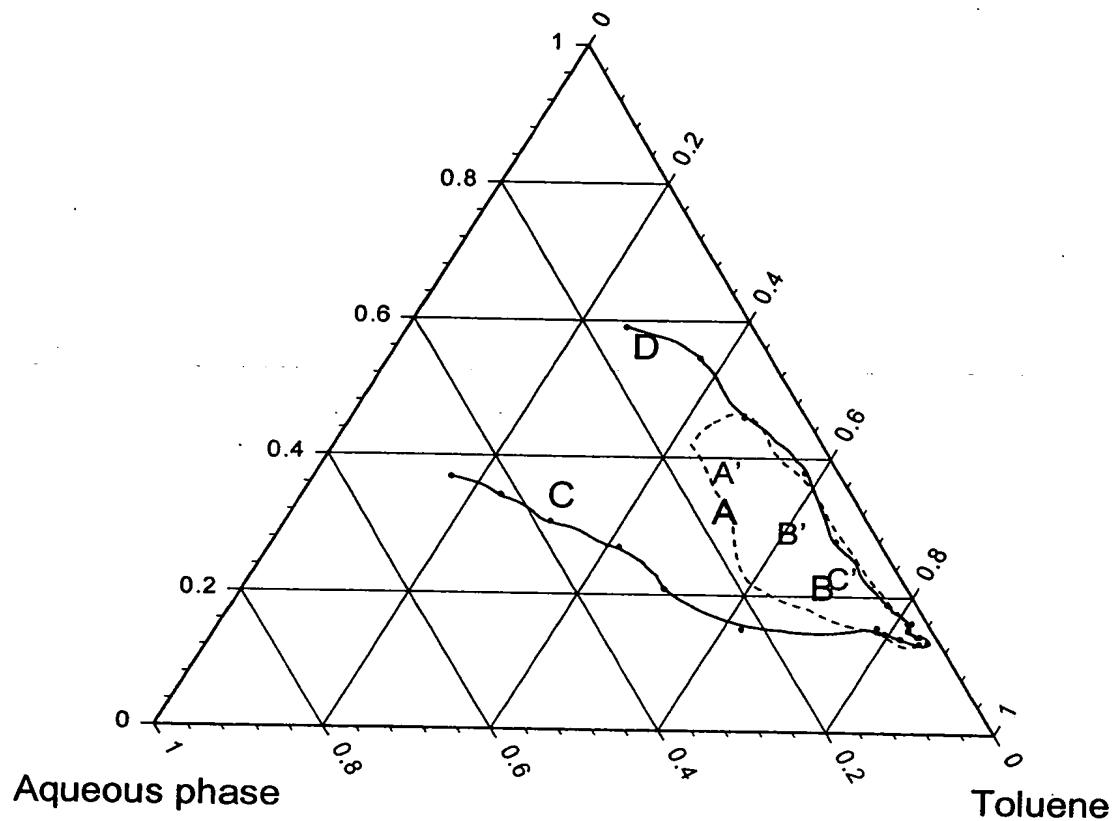


Figure 1. Phase diagrams with the surfactant CPC and cosurfactant butanol in the ratio of 2 to 1 by weight. The region enclosed in black line is the one with double the standard molar ratio of structure directing agent (1.2 : 1.0 triethylamine : phosphoric acid). The dash-line region represents standard molar ratio of triethylamine in the aqueous phase (0.6 : 1.0 triethylamine : phosphoric acid). A-D are compositions chosen for hydrothermal synthesis with double the molar ratio of triethylamine. A'-C' are compositions chosen for hydrothermal synthesis with the standard molar ratio of triethylamine.

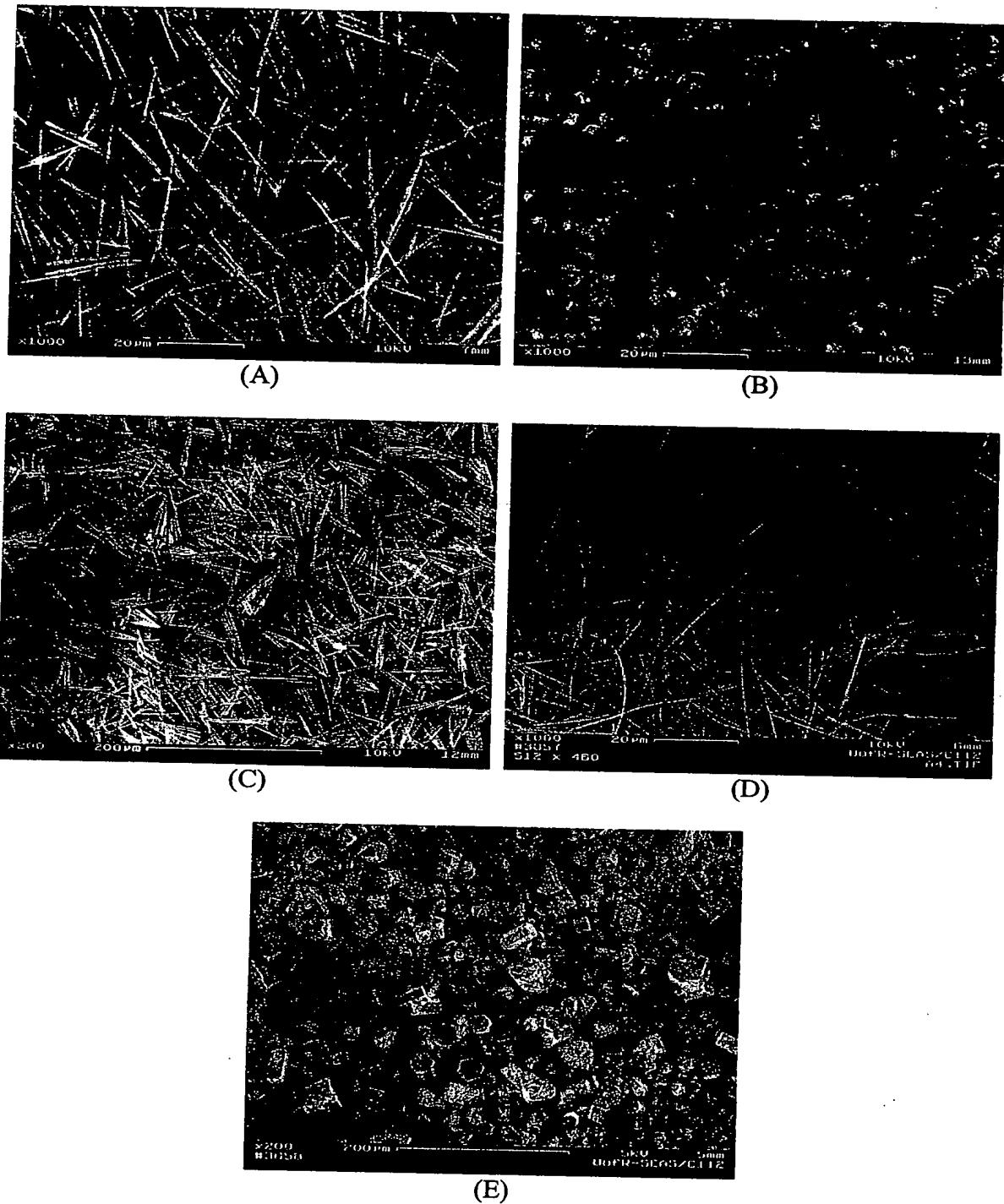


Figure 2. Products from conventional heating (6 hrs at 180°C) with double the standard amount of triethylamine. Figures 2A to 2D correspond to microemulsion compositions A to D respectively from Figure 1. Figure 2E is the control experiment without the microemulsion. The scale bars are 20 microns for A, B, and D; 200 microns for C and E.

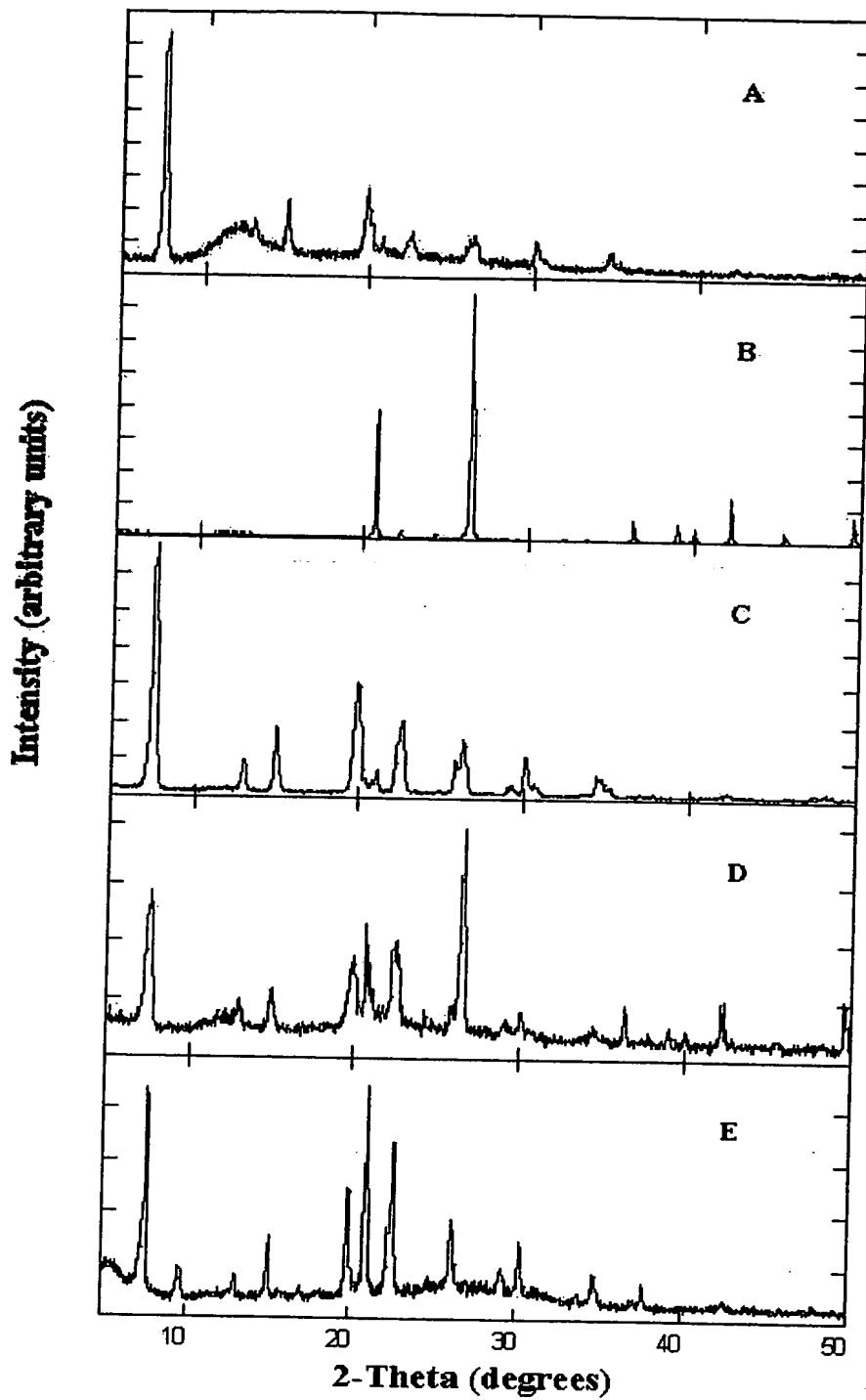


Figure 3. (A) ~ (E) X-ray diffraction patterns for products shown in Figure 2A to 2E respectively. .

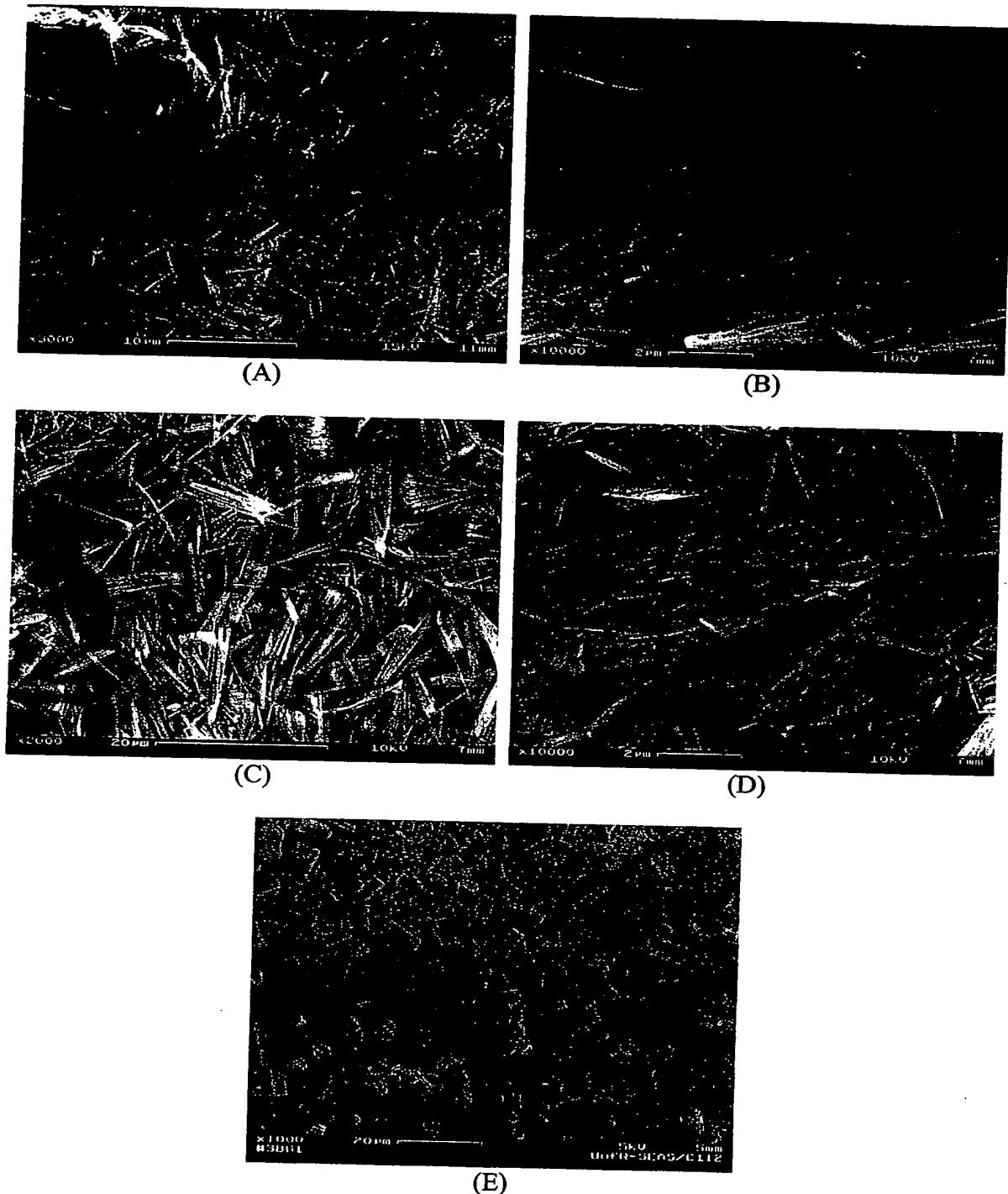


Figure 4. Products from microwave heating (17 min at 180°C) with double the standard amount of triethylamine. Figures 4A to 4D correspond to microemulsion compositions A to D respectively from Figure 1. Figure 4E is the control experiment without the microemulsion. The scale bars are A-10μm, B-2μm, C-20μm, D-2 μm, and E-20μm.

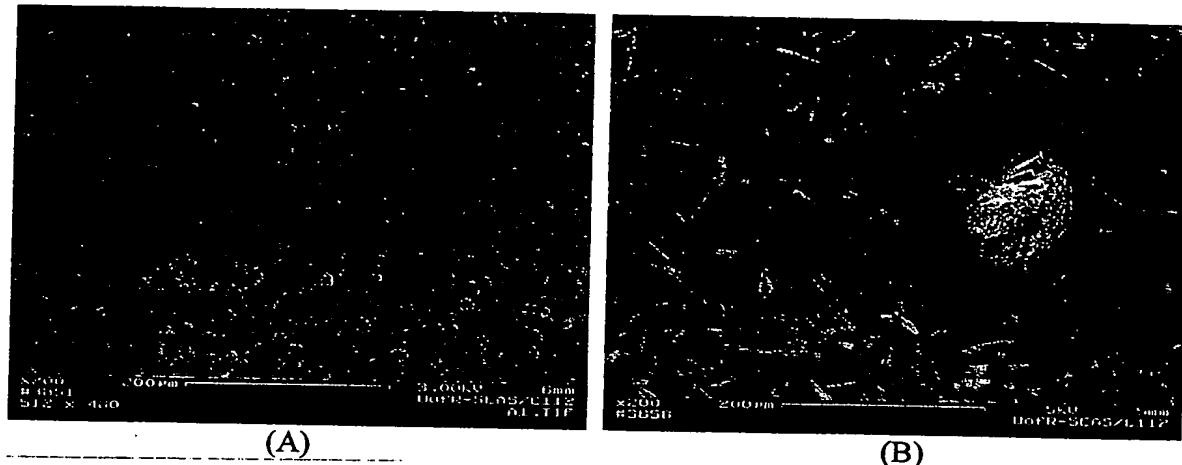


Figure 5. Products from conventional heating (6 hrs at 180°C) with standard triethylamine concentration. 5A is from a microemulsion with composition C' on Figure 1. 5B is the control experiment without the microemulsion. The scale bars are 200 μ m.



Figure 6. Products from microwave heating (17 min at 180°C) with standard triethylamine concentration. Figure 6A is from a microemulsion with composition A' on Figure 1. Figure 6B is the control experiment without the microemulsion. The scale bars are A-2 μ m and B-20 μ m.

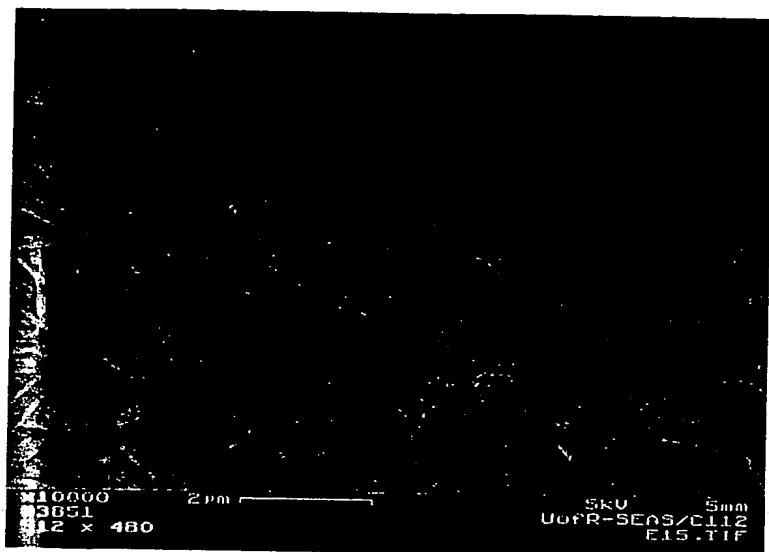
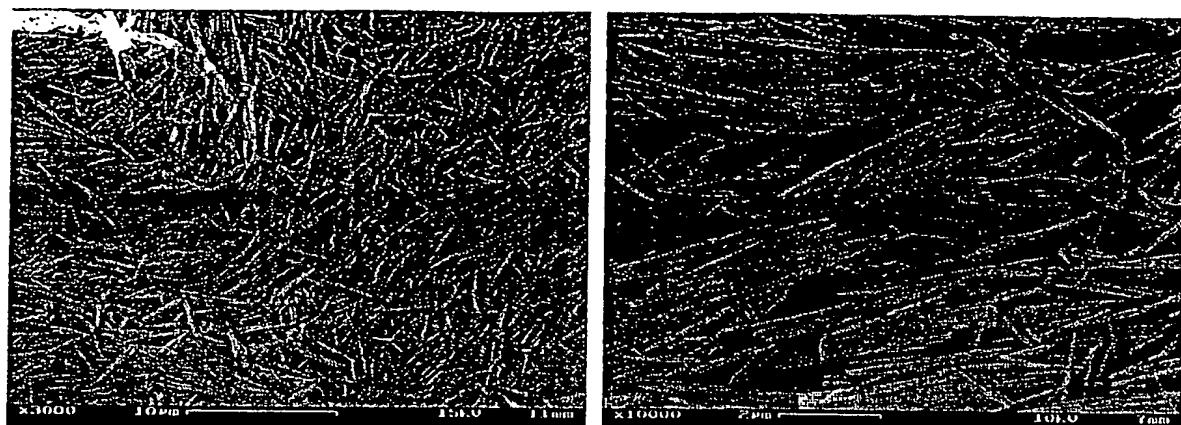
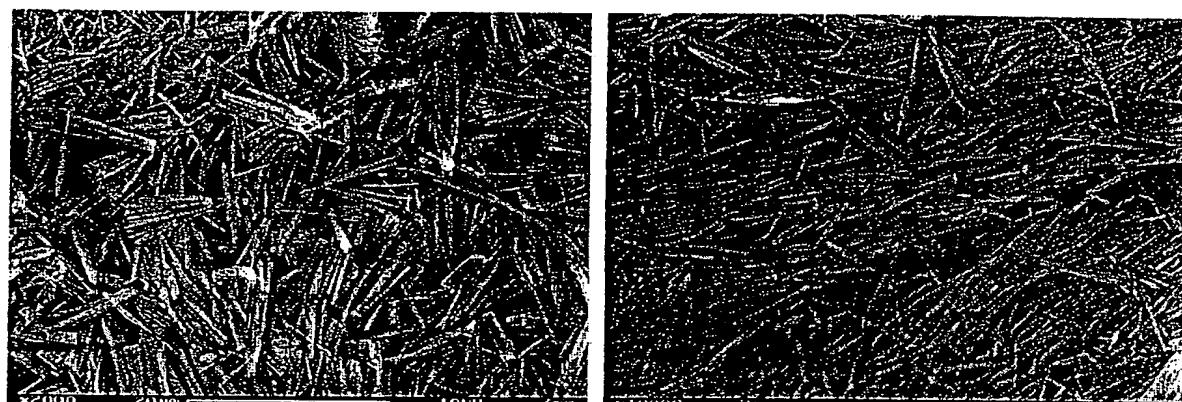


Figure 7. AlPO4-5 fibers crystallized by microwave heating (17 min at 180°C) with double the standard amount of triethylamine from a microemulsion with the weight ratio of CPC to butanol is 3 to 1. The scale bar is 2 microns.



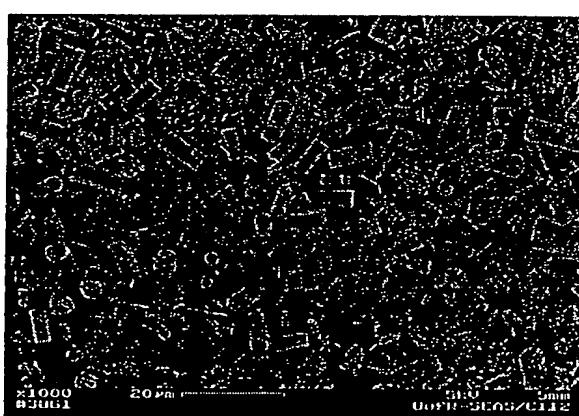
A

B



C

D



E

FIG. 7

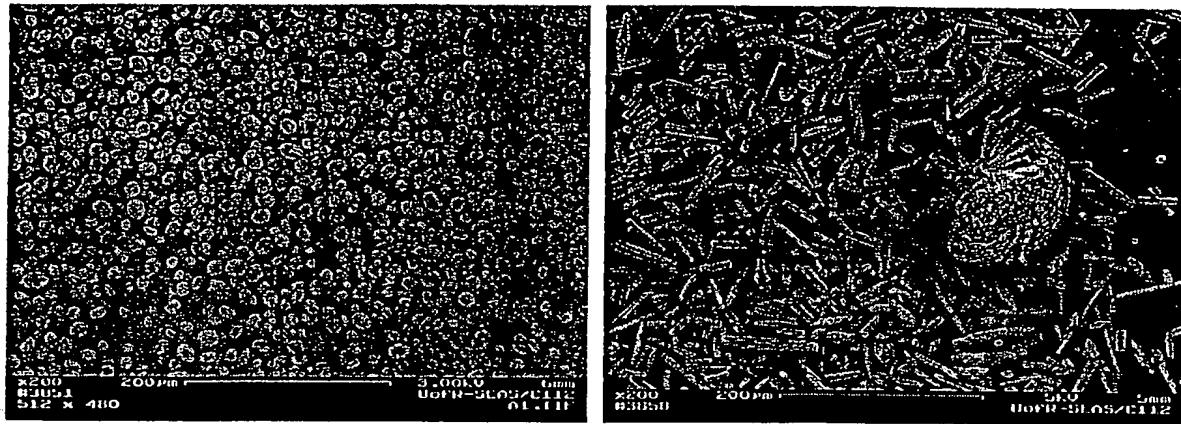


FIG. 8

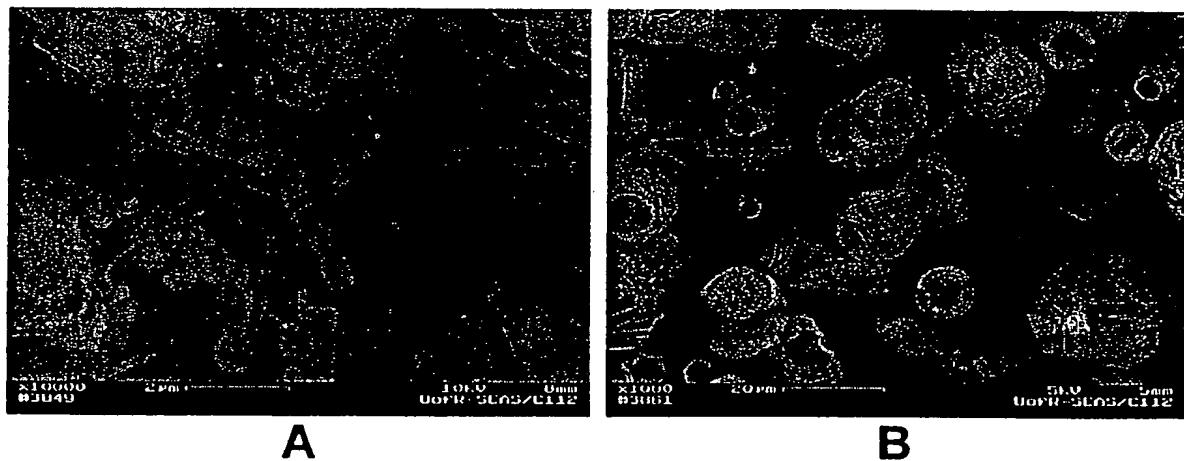


FIG. 9

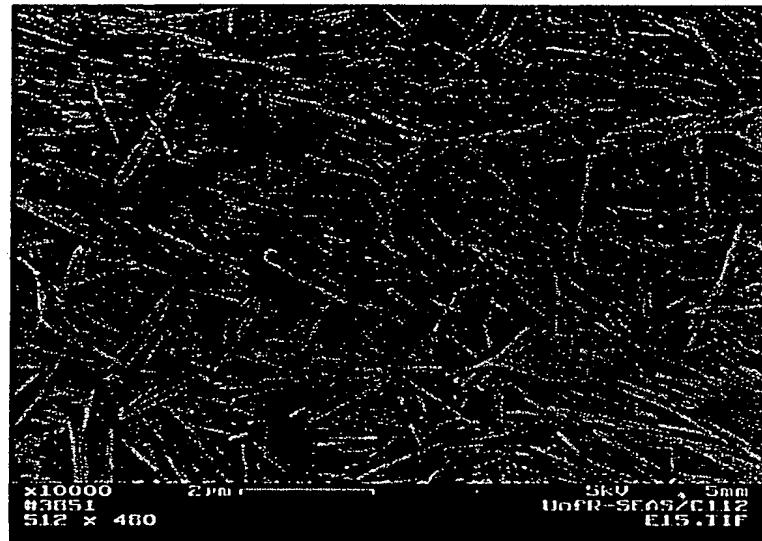


FIG. 10

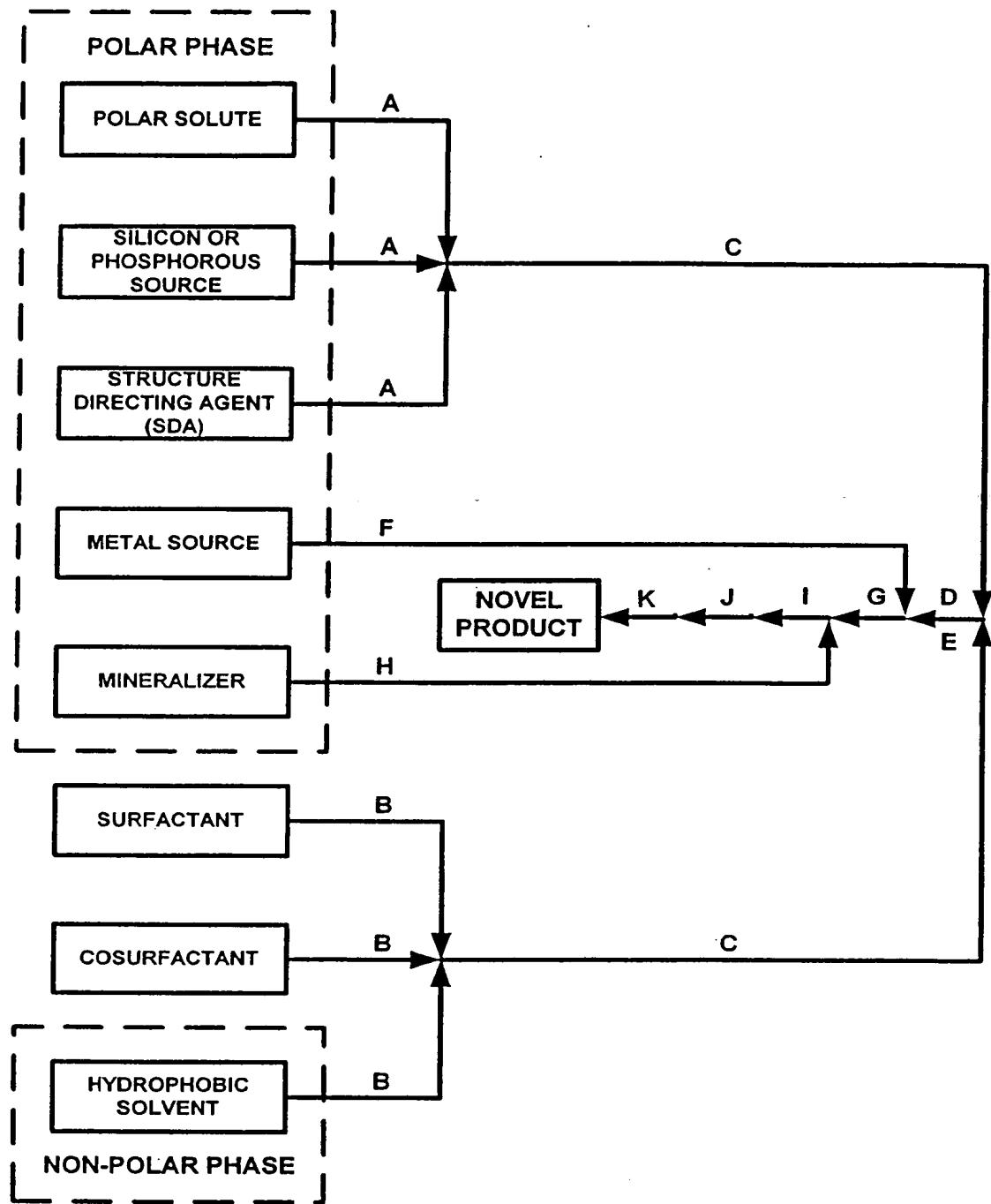


FIG. 11

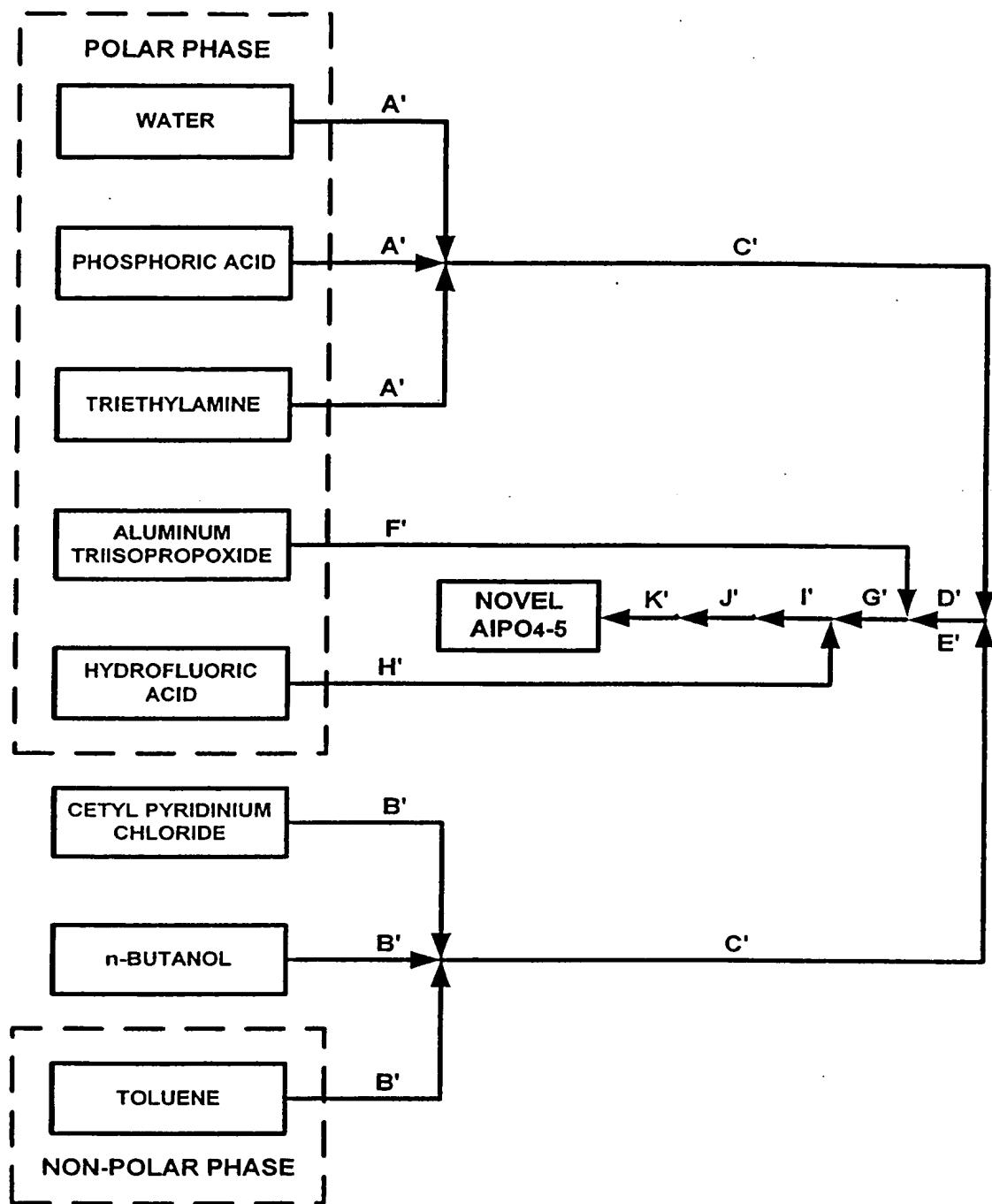


FIG. 12